AWARENESS/OPERATIONS LEVEL HAZARDOUS MATERIALS HOSPITAL DECONTAMINATION COURSE

DEPARTMENT OF VETERANS AFFAIRS
MEDICAL CENTER
BAY PINES, FLORIDA

HAZ-MAT/WMD DECON TRAINING TEAM

FIRST RESPONDER AWARENESS LEVEL COURSE

INTRODUCTION: First Responders at the Awareness Level shall be trained to meet all competencies of the Awareness Level. Additionally, awareness level first responders shall receive training to meet the requirements of the Occupational Safety & Health Administration (OSHA), and the Environmental Protection Agency (EPA). Personnel that respond or may be expected to respond to a hazardous materials incident (HMI), must know the requirements of the OSHA 1910.120 and EPA 311 training and emergency response plan.

DEFINITION: The First Responders at the Awareness Level are personnel who are likely to witness of discover a hazardous materials emergency or, in the course of their normal duties may be the first persons on the scene of an emergency involving hazardous materials. First responders at the awareness level are expected to recognize that a hazardous material is present, protect themselves, call for trained personnel, and secure the area. The most important duty of these personnel is to make proper notification to begin the emergency response sequence.

TARGET AUDIENCE: Hazardous materials responders at the awareness level that may be employed by public or private sector organizations, such as fire or emergency services, law enforcement, emergency management, public works, public health, utilities, transportation, contractor, and hospital organizations

Objectives: At the conclusion of the Awareness Level First Responder Course the student will be able to:

1. Define the different types of hazardous materials and identify the risks associated with them in an incident.

2. Given a simulated incident involving a hazardous material, identify the potential outcomes.

3. Given the data available during an incident response, demonstrate recognition of the presence of a hazardous substance.

4. Given the data available during an incident response, identify the hazardous substance present.

5. Define the role of the first responder awareness individual in the employer's emergency response plan, including site security and control and the Emergency Response Guidebook.

6. Given a simulated incident, determine the need for additional resources and make the appropriate notifications to the communications center.

7. Given a hazardous material incident scenario, demonstrate an understanding of the role of the first responder at the awareness level.

8. Describe the responsibility to analyze the incident to determine both the hazardous material present and the basic hazard and response information for each hazardous material.

9. Identify the responsibility to detect the presence of hazardous materials.

10. Identify the responsibility to survey a hazardous materials incident from a safe location to identify the name, UN/NA identification number, or type of placard applied for any hazardous material involved.

11. Identify the responsibility to collect hazard information from the current edition of the North American Emergency Response Guidebook.

12. Describe the responsibility to implement actions consistent with the local emergency response plan, the organization's standard operating procedure, and the current edition of the North American Emergency Response Guidebook.

13. Identify the responsibility to initiate the notification process.

Analyzing the Incident

1. Given various facility or transportation situations, or both, with and without hazardous materials present, identify those situations where hazardous materials are present.

2. Identify the definition of hazardous material

3. Identify the DOT hazard classes and divisions of hazardous materials and identify common examples of materials in each division.

4. Identify the primary hazards associated with each of the DOT hazard classes and divisions of hazardous materials by hazard class or division.

5. Identify the difference between hazardous materials incident and other emergencies.

6. Identify typical occupancies and locations in the community where hazardous materials manufactured, transported, stored, used, and disposed of.

7. Identify typical container shapes that can indicate hazardous materials.

8. Identify facility and transportation markings and colors that indicate hazardous materials, including: (a) UN/NA identification numbers; (b) NFPA 704 markings; (c) military hazardous markings; (d) special hazard communication markings; (e) pipeline markings; and (f) container markings.

9. Given an NFPA 704 marking, describe the significance of the colors, numbers, and special symbols.

10. Identify U.S. and Canadian placards and labels that indicate hazardous material

11. Identify where to find Material Safety Data Sheets (MSDS).

12. Identify entries on material safety data sheets that indicate the presence of hazardous materials.

13. Identify the entries on shipping papers/bill of lading that indicate the presence of hazardous materials.

14. Match the name of the shipping papers found in transportation (sir, highway, rail, and water) with the mode of transportation.

15. Identify the person responsible for having the shipping papers in each mode of transportation.

16. Identify where the shipping papers are found in each mode of transportation.

17. Identify where the shipping papers can be found in an emergency in each mode of transportation.

18. Identify examples of clues (other than occupancy/location, container shape, markings/color, placards/labels, MSDS, and shipping papers) that use the senses of sight, sound, and odor to indicate hazardous materials.

19. Describe the limitations of using the senses in determining the presence or absence of hazardous materials.

20. Identify the types of locations that may become targets for criminal and terrorist activity using hazardous materials. Examples include: Public assembly locations, public buildings, mass transit, places with high economic impact, telecommunications facilities, places of historical significance.

21 Identify at least four indicators of possible criminal or terrorist activity involving hazardous materials. Examples include: Hazardous materials or lab equipment that is not relevant to the occupancy; Intentional releases of hazardous materials; Unexplained patterns of sudden onset of illnesses or death; Unusual odors or tastes; Unexplained signs

of skin, eye, or airway irritation; Unusual security, locks, bard, on windows and barbed wire; Unexplained vapor clouds, mists, plumes; Patients twitching, tightness in chest, sweating, pin-point pupils (miosos), runny noses (rihnorrhea), and nausea and vomiting.

Analyzing the Incident:
Surveying the Hazardous Materials Incident from a Safe Location

1. Given examples of facility and transportation situations involving hazardous materials, identify the hazardous material(s) in each situation, by name, UN/NA identification number, or type of placard applied.

2. Identify the difficulties encountered in determining the specific names of hazardous materials in both the facilities and transportation.

3. Identify additional information concerning radionuclide identity and activity provided on radioactive material labels and shipping papers.

4. Identify sources for obtaining the names of UN/NA identification numbers for, or types of placard associated with hazardous materials in transportation.

6. Identify sources for obtaining the names of hazardous materials in a facility.

Analyzing the Incident:
Collecting Hazard Information

1. Given the identity of various hazardous materials (Name, UN/NA identification number, or type of placard), identify the fire, explosion, and health hazard information for each material by using the current edition of the North American Emergency Response Guidebook

2. Identify three methods for determining the appropriate guide page for a hazardous material.

3. Identify the two general types of hazards found on each guide page.

4. Identify difficulties encountered in using the senses to recognize radioactive material releases and radiation.

Implementing the Response:
Initiating Protective Actions

1. Given examples of facility and transportation hazardous materials incidents, the local emergency response plan, the organizations standard operating procedure, and the current edition of the North American Emergency Response Guidebook, identify the actions to be taken to protect themselves and others and to control access to the scene.

2. Identify the location of both the local emergency response plan and the organization's standard operating procedures.

3. Identify the role of the first responder at the awareness level during a hazardous materials incident.

4. Identify the basic precautions to be taken to protect themselves and others in a hazardous materials incident.

5. Identify the precautions necessary when providing emergency medical care to victims of hazardous materials incidents.

7. Identify typical ignition sources found at the scenes of hazardous materials incidents.

8. Identify ways hazardous materials are harmful to people, the environment, and property at hazardous materials incidents.

9. Identify the general routes of entry for human exposure to hazardous materials.

10. Given the identity of various hazardous materials (name, UN/NA identification number, or type placard), identify the following response information:
    a. Emergency action (fire, spill, or leak, and first aid)
    b. Personal protective necessary
    c. Initial isolation and protective action distances

11. Identify the definitions for each of the following protective actions:
    a. Isolation of the hazard area and denial of entry
    b. Evacuation
    c. Sheltering in place protection

12. Identify the shapes of recommended initial isolation and protective action zones.

13. Describe the difference between small and large spills as found in the table of Initial Isolation and Protective Action Zones.

14. Identifying the circumstances under which the following differences are used at a hazardous materials incident:
    a. Table of initial isolation and protective action distances
    b. Isolation distances in the numbered guide

15. Describe the difference between the isolation distances in the orange bordered guide pages and the protective action distances in the green bordered pages In the document.

16. Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials incidents.

18. Identify the specific actions necessary when an incident is suspected to involve criminal or terrorist activity"

a. Communicate the suspicion during the notification process
b. Isolate potentially exposed people
c. Document the initial observation
d. Attempt to preserve evidence while performing operational duties

Implementing the Response:
Initiating the Notification Process

1. Given either a facility or transportation scenario involving hazardous materials, with and without criminal or terrorist activities, identify the appropriate initial notifications to be made and how to make them, consistent with the local emergency response plan or the organizations standard operation procedures.

Topics of Instruction:

A. **Critical Teaching Points:** OSHA 1910.120 (q)(6)(i) First Responder Awareness Level: First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release or incident, and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the incident. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

1. An understanding of what hazardous substances are, and the risks associated with them.

2. An understanding of the potential outcomes associated with an emergency, created when hazardous materials are present.

3. The ability to recognize the presence of a hazardous substance in an emergency.

4. The ability to identify the hazardous substance, if possible.

5. An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the US Department of Transportation's Emergency Response Guidebook.

6. The ability to realize the need for additional resources, and to make the appropriate notifications.

B. **Methodologies:** The training method may be a combination of lecture, and media presentations with individual or small group exercises. The exercises may consist of

activities that practice the identification and recognition of hazardous materials from scenario descriptions and can use information sources such as the Emergency Response Guidebook, Material Safety Data Sheets to establish the presence of the hazardous material. Training should be targeted to the group you are working with.

C. **Transition Points:** The primary transition point is to move from the identification of the hazardous material to the risk assessment stage with additional knowledge of the selection of personal protective equipment, basic control, confinement, and containment methods, and the implementation of decontamination process. A short test may be given to assure a basic understanding of the principals and teaching points of the Awareness Level.

D. **Critical Resource Materials:**

1. Powerpoint presentation
2. US Department of Transportation Guidebook
3. ER Film, “Exodus”
4. Material Safety Data Sheets, various
5. Film, DOT Haz-Mat Safety Training

HAZ-MAT OPERATIONS LEVEL COURSE

INTRODUCTION: First responders at the Operations Level shall be trained to meet all requirements at the awareness level, and operations levels. In addition, the first responders at the operations level shall receive training to meet the requirements of Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA). OSHA establishes specific requirements, as outlined in 1910.120(q)(6)(i), as does the National Fire Protection Association.

DEFINITION: First Responders at the Operations Level are those who respond to releases or potential releases of hazardous materials as part of an initial response to the incident for the purpose of protecting nearby persons, the environment, or property from the effects of the release. They shall be trained to respond in a defensive fashion, to control the release from a safe distance and keep it from spreading.

TARGET AUDIENCE: First responders at the operations level are typically those persons who are the first to arrive at the scene of a hazardous materials incident. They may be employed by law enforcement, public service, fire, hospital or emergency services or a variety of private organizations.

Principal Objectives: At the conclusion of this course the student will be able to respond to releases of hazardous materials as part of an initial response for the purpose of protecting nearby persons, property, or the environment. These personnel are trained to respond in a defensive manner without actually trying to stop a release. Their function is to contain the material, keep it from spreading, and prevent exposure.

1. Given a simulated incident involving a hazardous material, demonstrate knowledge of basic hazard and risk assessment techniques.

2. Given a simulated incident involving a hazardous material, select and demonstrate proper use of personal protective equipment.

3. Define basic hazardous material terms.

4. Given a simulated incident involving a hazardous material, describe basic control, containment, and confinement operations within the capabilities and resources and personal protective equipment available within the students unit.

5. Given a simulated incident involving a hazardous material, list and define appropriate basic decontamination procedures.

6. Given a simulated hazardous materials incident, identify relevant Standard Operating Procedures and termination procedures.

7. Given a hazardous materials incident scenario, demonstrate an understanding of the role of First Responder at the Operations Level.

8. Describe the responsibility to analyze a hazardous materials incident and determine the magnitude of the problem in terms of outcomes, and demonstrate the ability to:

a. Identify the responsibility to survey the hazardous materials incident to identify the containers, and materials involved, determine whether hazardous materials have been released, and evaluate the surrounding conditions.

b. Identify the responsibility to collect hazard and response information from material safety data sheets, CHEMTREC, and shipper contacts.

c. Identify the responsibility to predict the likely behavior of a material as well as its container.

d. Identify the responsibility to estimate the potential harm at a hazardous materials incident.

e. Describe the responsibility to plan an initial response within the capabilities and competencies of available personnel, personnel protective equipment, and control equipment.

f. Identify the responsibility to describe the defensive options available for a given response objective.

g. Identify the responsibility to describe the defensive options available for a given response objective.

9. Identify the responsibility to determine whether the personal protective equipment provided is appropriate for implementing each defensive option.

10. Identify the responsibility to identify the emergency decontamination procedures.

11. Describe the responsibility to implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's standard operating procedures.

12. Identify the responsibility to establish and enforce scene control procedures including control zones, emergency decontamination, and communications.

13. Identify the responsibility to initiate an incident management system for hazardous materials incidents.

14. Identify the responsibility to don, work in, and doff personal protective equipment provided by the authority having jurisdiction.

15. Identify the responsibility to perform defensive control functions identified in the plan of action.

16. Describe the responsibility to evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently.

17. Identify the responsibility to evaluate the status of the defensive actions taken in accomplishing the response objective.

18. Identify the responsibility to communicate the status of the planned response.

Analyzing the Incident:
Surveying the Hazardous Materials Incident

1. Given examples of both facility and transportation scenarios involving hazardous materials, survey the incident to identify the containers and materials involved, determine whether hazardous materials have been released, and evaluate the surrounding conditions.

2. Given three examples each of liquid, gas, and solid hazardous materials, identify the general shapes of containers, in which hazardous materials are typically found.

3. Given examples of the following tank cars, identify each car by type:
   a. Nonpressure tank cars with and without expansion domes.
   b. Pressure tank car
   c. Cryogenic liquid tank car

4. Given examples of the following intermodal tank containers, identify each intermodal tank container by type:
   a. Nonpressure intermodal tank containers
   b. Pressure intermodal tank containers

5. Given examples of the following facility tanks, identify each fixed facility tank by type:
   a. Nonpressure facility tank
   b. Pressure facility tanks
   c. Cryogenic liquid tanks

7. Given examples of the following nonbulk packages, identify each package by type:
   a. Bags
   b. Carboys
   c. Cylinders
   d. Drums

8. Given examples of facility and transportation containers, identify the markings that differentiate one container from another.

9. Given examples of the following market transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

a. Rail transport
b. Intermodal equipment including tank containers
c. Highway transport vehicles, including cargo tanks

10. Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers,

11. Given examples of facility and transportation situations involving hazardous materials, identify the names of hazardous materials in each situation.

12. Identify the following information on a pipeline marker:
a. Product
b. Owner
d. Emergency telephone number

13. Given a pesticide label, identify each of the following pieces of information; then match the piece of information to its significance in surveying the hazardous materials incident:
a. Name of pesticide
b. Signal word
c. Pest control product
d. Precautionary statement
e. Hazard statement
f. Active ingredient

14. Identify and list the surrounding conditions that should be noted by the first responders when surveying hazardous materials incidents.

15. Give examples of ways to verify information obtained from a survey of a hazardous materials incident.

16. Identify at least three additional hazards that could be associated with an incident involving criminal or terrorist activity. Examples:
a. Secondary events intended for emergency responders
b. Armed resistance
c. Use of weapons
d. Booby traps
e. Secondary contamination from handling patients
f. Hostage barricade situation

Analyzing the Incident:
Collecting Hazard and Response Information

1. Given known hazardous materials, collected hazard and response information using material safety data sheets (MSDS),CHEMTREC/CANUTEC/SETIQ, and contacts with the shipper/manufacturer.

2. Match the definitions with the DOT hazard classes and divisions of hazardous materials, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

3. Identify two ways to obtain a material safety data sheet (MSDS) in an emergency.

Topics of Instruction:

A. **Critical Teaching Points:** First responders at the Operations Level are individuals who are likely to respond to a release of a hazardous material as part of their initial response for the purpose of protecting persons, property, and the environment. They are trained to respond in a defensive action without trying to stop the release with knowledge of risk assessment techniques, use of personal protective equipment, hazardous material terminology, perform basic control and containment procedures within the ability of their unit, have knowledge of the implementation of basic decontamination procedures, and a basic understanding of the standard operating procedures and termination process.

B. **Methodologies:** The training methods are in a classroom environment, with opportunities for small and larger group exercises indoors and outdoors in conjunction. Training is 16 hours with the awareness level as a prerequisite. Lectures with group activities are appropriate for much of the material. Incident scene organization and practice will require simulated incidents that may be best conducted as a field exercise.

C. **Critical Resource Materials:**

1. Powerpoint Presentations.
2. Films: Air Monitoring
   Personal Protective Equipment
   Hospital DECON
   Incident Command
3. Decontamination Set-up, and decontamination of Victims of an incident.

DEPARTMENT OF VETERANS AFFAIRS
MEDICAL CENTER
BAY PINES, FLORIDA

Hazardous Materials Awareness/Operations Level
Hospital Decontamination
Instructor Course